

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant:	Guillermo C. Bazan	)
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Serial No.:	10,595,179	) Examiner: R. S. Walters
		)
Filed:	August 21, 2006	) Art Unit: 1711
		)
For:	METHODS AND DEVICES COMPRISING	) Confirmation no. 3968
	SOLUBLE CONJUGATED POLYMERS	)
		)
Atty. Dkt. No.:	1279-454	)
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**DECLARATION OF INVENTORS UNDER 37 CFR 1.131**

We, Alan J. Heeger, Guillermo C. Bazan, Xiong Gong, Wanli Ma, Parameswar K. Iyer, and Bin Liu, declare as follows:

- 1) We are named inventors of and are knowledgeable about the subject matter disclosed in the application entitled METHODS AND DEVICES COMPRISING SOLUBLE CONJUGATED POLYMERS, the specification of which was filed on August 21, 2006 and has been assigned Serial No. 10,595,179.
- 2) We are knowledgeable about the subject matter disclosed in Exhibit 2 (totaling 19 pages), which comprises of an invention disclosure form and draft manuscript submitted to our University's Office of Technology on December 8, 2003 (see page 1, which is the facsimile cover sheet).
- 3) The experiments and devices disclosed on pages 6 – 19 of Exhibit 2 were performed in the United States, and are described by the claims of

this patent application.

- 4) On page 8, lines 8-12 (as an example of a “first material”), we report the synthesis of a water-soluble cationic conjugated copolymer ‘poly 1’.
- 5) On page 12 (middle paragraph), we deposited poly 1 on top of the emissive layer by spin-casting in methanol.
- 6) On page 11 (bottom paragraph), we synthesized semiconducting polymers PFO and MEH (that is, the “second material.”)
- 7) On page 8, lines 12 -14, we fabricated a multi-layer PLED device by casting a semiconducting polymer cast from solution in an organic solvent, and a poly 1 layer cast from solution in methanol.
- 8) On page 9, middle paragraph, we compared multilayer devices fabricated with a layer of semiconducting polymer (organic solvent soluble) with or without poly 1 (water-soluble), and demonstrated that devices with the poly 1 layer had improved performance over those without it.
- 9) On pages 18 and 19, in Figures 1 and 2, respectively, we demonstrated improved performances of the above multilayered devices.

We hereby declare that all statements made herein of my knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Signature of Inventors

1) **Alan J. Heeger**

Inventor's signature: \_\_\_\_\_

Date: \_\_\_\_\_

2) **Guillermo C. Bazan**

Inventor's signature: \_\_\_\_\_

Date: \_\_\_\_\_

3) **Xiong Gong**

Inventor's signature: \_\_\_\_\_

Date: \_\_\_\_\_

4) **Wanli Ma**

Inventor's signature: \_\_\_\_\_

Date: \_\_\_\_\_

5) **Parameswar K. Iyer**

Inventor's signature: \_\_\_\_\_

Date: \_\_\_\_\_

6) **Bin Liu**

Inventor's signature: \_\_\_\_\_

Date: \_\_\_\_\_